UNIVERSITI PUTRA MALAYSIA

SUITABILITY OF VISUAL RESOURCE ASSESSMENT PROCEDURE IN DETERMINING PUBLIC PERCEPTION OF MALAYSIAN LANDSCAPE QUALITY

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By

MOHD NAZRI HJ. SAIDON

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirement for the Degree of Master of Science

October 2007

DEDICATION

Dedicated to my beloved family: parents, Hj. Saidon Che Saad and Hjh Rogayah Mohamed Rasedi, two daughters named Nur Humaira and Nurul Huda. This is also especially, dedicated to my wife, Haslinawati Mohamed Dahim for her unfailing patience and encouragement.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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October 2007

Chair : Associate Professor Ramdzani Abdullah, PhD

Faculty: Environmental Studies

The issue on who is responsible to determine whether visual landscape quality is good or bad, attractive or unattractive, and so forth is still in much debate. This research was conducted to investigate the preference between expert personnel and public in visual landscape quality. This is due to the problem whether either method being use by expert can represent public preferences. The hypothesis of this study is there is no significant difference in visual landscape quality preferences between the expert and public to the study area. The goal was to determine if the expert method (VRAP) is suitable in representing the public preferences for visual quality of Malaysian landscape. There are two groups of respondents, which are expert and public groups. The expert consists of ten (n=10) respondents conducted the field assessment by following strictly the expert method (VRAP) while the public respondents were shown thirty-six tests slide photographs (based on public method). These photographs were systematically taken at the site and the respondents were asked to rate their preferences for each photos. The scale of visual quality preference

was given range from extremely attractive, attractive, little attractive, unattractive to extremely unattractive. The individual score (percentage ranking) of public assessment was then compared to the median (percentage ranking) of expert groups evaluation using non-parametric statistical analysis. At the same time, several statistical tests were also conducted to determine the pattern of expert and public preferences of visual quality assessment. Results indicated that there are significant difference of visual preference (*p-value =0.004*) between the expert and public at the study site. This finding suggests that experts and public have difference perception of visual quality preference of Malaysian landscape. Therefore, the expert method (VRAP) is not able to represent public preferences in this study.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

KESESUAIAN PROSIDUR PENILAIAN SUMBER VISUAL DI DALAM MENENTUKAN PERSEPSI ORANG RAMAI TERHADAP KUALITI LANDSKAP MALAYSIA

Oleh

MOHD NAZRI HJ. SAIDON

Oktober 2007

Pengerusi: Profesor Madya Ramdzani Abdullah, PhD

Fakulti : Pengajian Alam Sekitar

Isu utama dalam kajian penilain landskap visual ialah pihak yang bertanggungjawab untuk menentukan landskap visual baik atau buruk, menarik atau tidak menarik, dan sebagainya masih lagi giat diperbincangkan. Kajian ini dijalankan untuk menyiasat penilaian kualiti landskap visual di antara kumpulan pakar landskap dengan kumpulan orang awam. Ini berdasarkan masalah semasa yang mana kaedah yang digunapakai oleh kumpulan pakar boleh mewakili pandangan kumpulan orang ramai. Hepotesis kajian menyatakan bahawa tidak terdapat perbezaan yang signifikan antara kumpulan pakar landskap dengan kumpulan orang ramai dalam penilaian kualiti visual. Matlamat kajian ialah menentukan samada kaedah pakar 'VRAP' yang diguna pakai oleh kumpulan pakar landskap boleh mewakili pilihan orang ramai tentang kualiti visual landskap Malaysia. Terdapat dua kumpulan responden iaitu kumpulan pakar dan tidak pakar dalam bidang landskap. Kumpulan pakar terdiri dari sepuluh orang responden yang melalui persampelan rawak dan telah pergi ke

lapangan untuk menilai kualiti visual berpandukan sepenuhnya teknik VRAP. Manakala kumpulan bukan pakar terdiri daripada 160 responden yang dipilih dari kelompok kumpulan sains menggunakan persampelan "*convenient*'. Mereka ditunjukkan sebanyak 36 slaid dan diminta untuk menyatakan penilaian untuk setiap slaid. Skala penilaian ialah dari sangat menarik, menarik, sedikit manarik, tidak menarik dan sangat tidak menarik. Jumlah markah individu (telah ditukar dalam unit peratus) bagi setiap responden kumpulan bukan pakar kemudian dibandingkan dengan median skor (telah ditukar unit dalam peratus) kumpulan pakar landskap dengan menggunakan analisis tidak berparameter. Beberapa ujian lain dijalankan untuk mendapatkan corak pilihan penilaian visual kedua-dua kumpulan. Keputusan kajian mendapati terdapat perbezaan yang signifikan antara 2 kumpulan yang dibandingkan dalam kajian ini (*p-value*=0.004). Justeru itu, kumpulan pakar dan tidak pakar mempunyai perbezaan terhadap kualiti visual di Malaysia. Oleh kerana itu, disimpulkan bahawa kaedah pakar (VRAP) tidak boleh mewakili pilihan orang ramai terhadap kualiti visual landskap Malaysia.

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Finally, I also wish to express special thanks to my family and others for their support and encouragement, especially to my beloved wife for her encouragement, prayer, support and understanding in making this study possible.

I certify that an Examination Committee has met on 9th October 2007 to conduct the final examination of Mohd Nazri bin Saidon on his Master of Science thesis entitled "Suitability of Visual Resource Assessment Procedure in Determining Public Perception of Malaysian Landscape Quality" in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the student be awarded the degree of Master of Science.

Members of the Examination Committee were as follows:

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Date: 29 January 2008

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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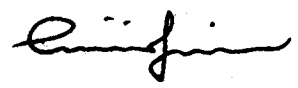

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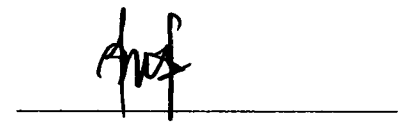
Date: 21 Februari 2008

DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.



MOHD NAZRI HJ. SAIDON

Date: 7/4/2008

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GLOSSARY OF TERMS

A	Attractive
BLM	Bureau of Land Management
BSL	Below Sea Level
DOE	Department of Environment
EA	Extremely Attractive
EIA	Environmental Impact Assessment
EXCO	State Executive Council
EUA	Extremely Unattractive
GLAVIA	Guidelines for Landscape and Visual Impact Assessment
HOEIAG	Handbook of EIA Guidelines
KLIA	Kuala Lumpur International Airport
LA	Little Attractive
LIA	Landscape Impact Assessment
MCS	Management Classification System
NCPC	The National Planning Committee
PhD	Philosophy of Doctorate
SBE	Scenic Beauty Estimation
SMS	Scenery Management System
SPSS	Statistical Package for Social Science
TLIIEA	The Landscape Institute and the Ins. of Environmental Assessment
TLIIEMA	The Landscape Institute and the Ins. of Environmental Management and Assessment.
UA	Unattractive

UPM	Universiti Putra Malaysia
USA	United State of America
USACE	US Army Corps of Engineers
UK	United Kingdom
VAC	Visual Absorption Capability
VIA	Visual Impact Assessment
VMS	Visual Management System
VRAP	Visual Resource Assessment Procedure
VRM	Visual Resource Management

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

A series of major floods in the late sixties and Stockholm Conference on the Human Environment in 1972 has created awareness on environmental impact resulting from development. As a result of the above events and other situations which were related to environmental problems, Environmental Quality Act 1974, that require development more than 50 acres to carried out Environmental Impact Assessment (EIA) was gazetted on the 5th of November 1987. Generally, the EIA has been introduced as a tool to prevent environmental problems caused by development project as well as a tool for making decisions regarding new development project.

"Visual quality is very important for the quality of life" (Lange, 1994, p.101) and lately, the public begin to be aware about the importance of keeping good environment as well as conserving and protecting visual resources. However, issues regarding distortion for visual quality can happen anywhere, for example a study done by Lai and Tao (2003, p.672) revealed that from the top 25 type's hazards in Hong Kong, the visual pollution and traffic noise issue are perceived to be the greatest threat to the local environment than the global environment, and the hazard are possible contributor to the decrease quality of life. Slovic (1987, p.281) asserted that "if the hazard's score is higher, the hazard may contribute to the higher

perceived risk to the human". Those situations informed that people are concern about distortion of the view.

The Star dated 11th of June 2005 reported that a community in Damansara complained to the Petaling Jaya Municipal Council local authority regarding the blockage of a good view because a huge advertisement signage have been placed at a junction between Taman Tun Dr Ismail and Damansara Utama. Furthermore, the signage distracting the motorists view, thus causing hazard to them. This shows the way people feel about a certain view as the problem manage to create an attention from the public (Berita Harian, dated 27th April 2005).

In the early 2005, Malaysians were shocked by news in the mass and electronic media on the proposed residential and commercial development in Seksyen U10 in Shah Alam. The news reported that there will be potential interventions to the natural environment at the area that will diminish visual quality. As a result, people questioned and queried about the *Lapuran Cadangan Pemajuan Alam Sekitar* for that particular project. It is assumed that the developers took advantage due to the weakness of guidelines, the loophole of the EIA, or lack of management practice by the Shah Alam City Council (The Sun, dated 07th March 2005).

Based on the literature reviewed, EIA's guidelines in Malaysia do not addressed elaborately the landscape and visual assessments issues and methods in comparison to other environmental entities such as water, noise, soil pollution etc. This is perhaps due to lack of awareness among administrator on the important of visual quality to the quality of life. Furthermore, EIA do not have any clause mentioning

the "protection, conservation and management of visual resources" in Malaysia legislation (Mustafa, 1999, p.9).

Thus, it is concluded that the EIA's report in Malaysia require less visual assessment study in determining the approval of particular project development. One possible reason could be there is no systematic way in visual assessment methods to assess visual quality in Malaysia. Thus, what is the best method to assess visual quality in Malaysia?

Many methods are used in assessing visual quality all over the world. It is carry out by the public or expert method. However, they were largely carried out by experts and practice in the United States and European States since 1960's. In some countries, the visual aspect of the environment is well protected. For example, in the United States, the United State Supreme Court stated, it is the right of every citizens of the states to enjoy navigable streams including the enjoyment of scenic beauty (The Macaulay Institute, 2004).

1.2 Problem Statement

There is a main issue regarding expert and public respondents in visual assessment. Who is responsible to determine whether the visual landscape quality is good or bad, attractive or unattractive, and so forth? This issue is quite obvious which has been debated in many researchers. It was related to both parties, whether the assessment of scenic quality should rely on the public or design experts. At one stage, expert's evaluation is leading the public in assessing and evaluating visual quality.

This shows that, expert's assessment has dominated landscape visual assessment study than the public's assessment. However, there was no serious attempt to determine whether expert's assessment in visual quality could produce results representing public preferences in Malaysia, whereas many research (e.g: Kaplan, 1988) show that the public have different preference than expert.

It is argued that each individual has different perception about visual quality, but it might come to similar results, if assessment involving the expert and public are put together in a research. This problem is significant because at the end, it is the public who will use, maintained and support the lands resources. In fact, the current research has shown that, scenery enhances peoples' lives; there is an improvement through public participation in notifying their preference about visual quality.

In this study, the researcher investigates the visual quality preferences between the expert and the public. The research problem is whether the methods that is currently being used by the expert can represent public preferences. If these questions could be answered, studies about visual landscape quality in Malaysia can be more systematic and promising, and thus making EIA's report much more informative and proactive.

1.3 Scope of the Study

There are two different studies being carried out. It involves the expert and public, and they are assessed using different visual quality assessing method. The public group was assessed using public preference method, while the expert groups were